

## MATTERS ARISING

### An outbreak of penicillin-sensitive strain of *Neisseria gonorrhoeae* in Sydney men

The recent article by Rowbottom *et al*<sup>1</sup> concerning an outbreak of a penicillin sensitive strain of *Neisseria gonorrhoeae* prompts us to report the recent emergence of a new strain of infection in the gay men attending the genitourinary medicine clinic in Edinburgh, Scotland.

In 1993 we were aware of an increase in the number of infections with serovar 1A-6 in gay men. Over the 4 year period 1990 to 1993 infections due to 1A-6 accounted for 4.5% (23/508) of all cases of gonorrhoea in Edinburgh. In gay men between 1990-92 1A-6 infections only accounted for 3.4% (5/147) of infections but in 1993 this increased with 21% (7/33) of homosexually or bisexually acquired infections ( $p = 0.02$ , Fishers exact test). The prevalence of 1A-6 in the heterosexual population did not alter significantly (1990-92:10/260 [3.8%] cf. 1993:1/41 [2.4%]).

Classification of infections as homosexually acquired was based on the patients' self reported behaviour but additional confirmation was provided by the high male:female sex ratio (19:4) with no 1A-6 infections diagnosed in women in 1993. The sites of infection were also consistent with increased homosexual acquisition with rectal or pharyngeal infections accounting for 5 of the 8 1A-6 infections in 1993 compared with 5 out of 15 1A-6 infections in 1990-92.

An association between the serovar isolated and sexual orientation is well recognised.<sup>2,3</sup> 1A-1/2 infections are commonly seen in heterosexual patients<sup>4</sup> whilst 1B strains are commoner in gay men.<sup>5,6</sup> Thus the recent increase in incidence of infections with 1A-6 in gay men is unusual.

There are a number of possible explanations for the observed change in serovar pattern. Increased resistance to penicillin may provide a selective advantage in the gay population and serovars isolated from gay men tend to have a reduced sensitivity to penicillin.<sup>5</sup> Although 1A strains are usually more sensitive to penicillin than 1B isolates,<sup>7,8</sup> a change in penicillin sensitivity in 1A-6 strains was evident between 1990-92 and 1993 with a decrease in the proportion of isolates with an MIC of  $< 0.5$  mg/l from 93% (14/15) to 12% (1/8) ( $p < 0.01$ ). Although such resistance may be an advantage where antibiotic pressure is high there is generally poor correlation between the level of resistance to antibiotics and prevalence of a serovar<sup>9</sup> possibly as a result of an associated impaired uptake of nutrients.

Alternatively the sharp increase in 1A-6 infections in gay men may be a result of its chance introduction into a "high frequency transmitter" group of promiscuous individuals which might result in a brief and self limiting micro epidemic. One possible source for this strain is the Far East where 1A-6 infections are common.<sup>10</sup> The isolation of all seven homosexual isolates in the first six months of 1993 would support this hypo-

thesis. Interestingly although all seven homosexually acquired infections were acquired locally, the one heterosexual infection in 1993 was acquired in the Far East raising the possibility that this individual was actually bisexual.

Thus, although uncommon, 1A serogroup infections can be associated with both an outbreak of homosexually acquired infection and with reduced penicillin sensitivity.

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### The value of primary colposcopy in genitourinary medicine

Moss and colleagues<sup>1</sup> have reviewed their use of "primary colposcopy"—that is colposcopy used as a screening test—in a population of genitourinary medicine (GUM) clinic attenders. They appear to suggest that they have demonstrated a need for such screening and even suggest that such screening would be cost effective. I would like to raise some doubts.

They report only the results of "primary colposcopy" in 1,338 women who had "an abnormal transformation zone". We are not told how many colposcopies in total were performed under this regime, the majority of which might be assumed to have been normal. It would appear that a very large number of colposcopies had to be performed to detect 15 cases of cervical intraepithelial neoplasia (CIN) grade 2/3; there is no evidence that the current national screening policy would not have detected these lesions on subsequent cytology

and before the development of invasive disease. It has already been shown that colposcopy as a screening tool will detect about three times as many lesions as cytology, but that these additional lesions are smaller, and of unknown natural history.<sup>2</sup> It has also been shown that using colposcopy as screening in a GUM population will throw up a large proportion of diagnoses of CIN.<sup>3</sup> The majority of these cases are of low grade lesions (again of uncertain natural history). When the data from reference 2 and reference 3 are compared it can be seen that the incidence of CIN lesions and of cytology false-negatives is almost identical among the younger age group attending GUM clinics<sup>3</sup> (and personal communication, P.G. Walker). These observations suggest that GUM clinic attenders are not at particularly increased risk for CIN lesions compared with similar aged women in the general population, and further that the cytology false-negative rate is also similar. If Moss and colleagues view is to be accepted, then the logical implication is that "primary" or screening colposcopy is warranted in all young women. Clearly such screening is not supported by these data. It should be borne in mind that the 12.3% incidence of CIN is not 12.3% of the total female GUM clinic population but only among the 1,338 with "an abnormal transformation zone".

Attempts to define high risk groups for screening should not be blindly accepted. Hakama and colleagues<sup>4</sup> showed that screening high risk groups for cervical disease was ineffective, as it concentrated too much effort on small groups who may be at increased risk, but who may only represent a fraction of the cases. Austoker and Duncan<sup>5</sup> and the National Co-ordinating Network<sup>6</sup> for cervical screening have indicated that increased surveillance, of high risk groups, in the form of more frequent screening, is inappropriate. I fail to see how this advice can permit the increased screening in the form of screening colposcopy.

Among Moss and colleagues' references was a rather sceptical review of the value of cervical screening: might I also sceptically inquire as to whether there are any data on how many of the cases of cervical cancer diagnosed in the Doncaster area had ever been GUM clinic attenders? I suspect very few.

The data presented by Moss and colleagues are interesting, in that they demonstrate that false negatives of cytology exist in GUM patients as in other women; that the correlation between cytology and colposcopically directed biopsies is less than perfect in GUM patients as it is in other women; and provide no evidence of a useful role for "primary colposcopy" outside of a research setting. Until such evidence is produced genitourinary physicians should be on their guard not to be pushed headlong into a pointless colposcopic search for CIN lesions, and should continue to regard cytological screening as being as relevant to their patients as to women in primary care family planning and gynaecology clinics.

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